

Title (en)  
HIGH PRESSURE FUEL GAS PUMP

Title (de)  
HOCHDRUCKBRENNGASPUMPE

Title (fr)  
POMPE À GAZ COMBUSTIBLE HAUTE PRESSION

Publication  
**EP 3504432 A1 20190703 (EN)**

Application  
**EP 17765321 A 20170829**

Priority  
• US 201662380855 P 20160829  
• US 2017049058 W 20170829

Abstract (en)  
[origin: US2018058441A1] There is disclosed a modular, linearly actuated high-pressure pump for use in various applications with high-pressure fuel systems, in particular liquid cryogenic fuels such as Natural Gas, Hydrogen, Nitrogen and Argon (LNG/LH2/LN2/LAR). The pump utilizes linear actuation which smooths out the power profile. There are no dynamic seals which prevents failure from leakage. The primary benefit of a smooth, no pulse output and lack of dynamic seals is a longer life of the pump. Marine fuel systems that utilize cryogenic LNG are a primary application.

IPC 8 full level  
**F04B 15/08** (2006.01); **B63H 21/38** (2006.01); **F02M 21/02** (2006.01); **F04B 9/02** (2006.01); **F04B 11/00** (2006.01); **F04B 23/02** (2006.01)

CPC (source: EP KR RU US)  
**B63H 21/38** (2013.01 - EP US); **F02M 21/02** (2013.01 - EP RU US); **F02M 21/0218** (2013.01 - EP US); **F02M 21/0245** (2013.01 - EP KR US); **F04B 9/02** (2013.01 - EP KR US); **F04B 11/005** (2013.01 - EP KR RU US); **F04B 15/08** (2013.01 - EP KR RU US); **F04B 17/042** (2013.01 - KR US); **F04B 23/026** (2013.01 - EP KR US); **F04B 49/065** (2013.01 - KR US); **F04B 2015/081** (2013.01 - EP KR US); **F05B 2210/12** (2013.01 - KR); **Y02T 10/30** (2013.01 - EP KR US)

Citation (search report)  
See references of WO 2018044857A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**US 10330049 B2 20190625**; **US 2018058441 A1 20180301**; CN 109715941 A 20190503; CN 109715941 B 20200131; DK 3504432 T3 20200622; EP 3504432 A1 20190703; EP 3504432 B1 20200401; ES 2796383 T3 20201126; JP 2019526742 A 20190919; JP 6611988 B2 20191127; KR 102041148 B1 20191106; KR 20190039321 A 20190410; PL 3504432 T3 20200727; RU 2703048 C1 20191015; WO 2018044857 A1 20180308

DOCDB simple family (application)  
**US 201715689216 A 20170829**; CN 201780053965 A 20170829; DK 17765321 T 20170829; EP 17765321 A 20170829; ES 17765321 T 20170829; JP 2019511956 A 20170829; KR 20197008641 A 20170829; PL 17765321 T 20170829; RU 2019109041 A 20170829; US 2017049058 W 20170829